

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Khatwani et al.**

Serial No. **09/579,256**

Filed: **May 25, 2000**

For: **Method and System for
Incorporation of Graphical Print
Techniques in a Web Browser**

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Group Art Unit: **2176**

Examiner: **Botts, Michael K.**

**Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450**

35525
PATENT TRADEMARK OFFICE
CUSTOMER NUMBER

APPEAL BRIEF (37 C.F.R. 41.37)

This brief is in furtherance of the Notice of Appeal, filed in this case on December 12, 2006.

No fees are required for the filing of this Appeal Brief. No additional fees are believed to be necessary. If, however, any additional fees are required, I authorize the Commissioner to charge these fees which may be required to IBM Corporation Deposit Account No. 09-0447. No extension of time is believed to be necessary. If, however, an extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to IBM Corporation Deposit Account No. 09-0447.

REAL PARTY IN INTEREST

The real party in interest in this appeal is the following party: International Business Machines Corporation of Armonk, New York.

RELATED APPEALS AND INTERFERENCES

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal, there are no such appeals or interferences.

STATUS OF CLAIMS

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

Claims in the application are: 1-7, 9-17, 19-25, 27-37, and 39-70.

B. STATUS OF ALL THE CLAIMS IN APPLICATION

1. Claims canceled: 8, 18, 26, and 38.
2. Claims withdrawn from consideration but not canceled: NONE.
3. Claims pending: 1-7, 9-17, 19-25, 27-37, and 39-70.
4. Claims allowed: NONE.
5. Claims rejected: 1-7, 9-17, 19-25, 27-37, and 39-70.
6. Claims objected to: NONE.

C. CLAIMS ON APPEAL

The claims on appeal are: 1-7, 9-17, 19-25, 27-37, and 39-70.

STATUS OF AMENDMENTS

There are no amendments after the final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1:

The present invention provides a method in a web browser on a data processing system for processing a document. (Specification, page 20, line 26, to page 21, line 3) The present invention receives a first web document including formatting information used to display the first web document. (Specification, page 16, line 22, to page 17, line 6) The present invention receives a request to present a selected portion of the first web document. (Specification, page 19, lines 5-16) The present invention identifies formatting information associated with the selected portion of the first web document. (Specification, page 22, line 27, to page 23, line 2 and page 23, line 6, to page 26, line 10) The present invention creates in the web browser a second web document including the selected portion and the formatting information associated with the selected portion, in response to receiving the request, wherein the first web document and the second web document are markup language documents. (Specification, page 23, lines 2-5) The present invention inserts virtual font indicators before and after text within the selected portion in response to a request to change a font attribute of the selected portion. (Specification, page 27, line 26, to page 28, line 13) The present invention inserts at least one virtual page break indicator within the selected portion in response to a request to identify a page break in the selected portion. (Specification, page 31, lines 6-21)

Independent claim 13:

The present invention provides a method in a web browser on a data processing system for processing a document. (Specification, page 25, line 31, to page 26, line 10) The present invention receives a first web document. (Specification, page 16, line 22, to page 17, line 6) The present invention receives a request to change a font attribute of a selected portion of the first web document. (Specification, page 19, lines 17-29) The present invention creates in the web browser a second web document from the first web document, wherein the font attribute, within the second web document, of the selected portion is changed in response to receiving the request

to change the font attribute of the selected portion, wherein the first web document and the second web document are markup language documents. (Specification, page 27, line 10, to page 29, line 3)

Dependent claims 14, 22, 54, and 57:

The present invention provides for the step of creating the second web document includes inserting virtual font indicators before and after text within the selected portion. (Specification, page 21, lines 27-30)

Dependent claims 16, 24, 55, and 58:

The present invention provides for the output device is a display device, the selected portion being displayed according to the virtual font indicators. (Specification, page 21, line 30, to page 22, line 2)

Dependent claim 30:

The present invention provides for the step of creating the second web document comprises creating a copy of the first web document and changing the font attribute of the selected portion within the copy of the first web document. (Specification, page 26, lines 13-15)

Dependent claim 31:

The present invention provides for the step of creating the second web document comprises changing the font attribute of the selected portion within the first web document to create the second web document. (Specification, page 26, line 16, to page 27, line 9)

Independent claim 32:

The present invention provides a method in a web browser on a data processing system for processing a document. (Specification, page 29, lines 4-16) The present invention receives a first web document. (Specification, page 16, line 22, to page 17, line 6) The present invention receives a request to display page break indicators within the first web document. (Specification, page 20, lines 7-15) The present invention identifies page break information for the first web document for an output device. (Specification, page 30, lines 25-30) The present invention creates in the web browser a second web document from the first web document, wherein at least one virtual page break indicator is inserted into the second web document, in response to the page break information, to indicate the location of page breaks, wherein the first web document and the second web document are markup language documents. (Specification, page 30, line 30, to page 31, line 21)

Independent claim 47:

The present invention provides a method in a web browser on a data processing system for processing a document. (Specification, page 20, line 26, to page 21, line 3) The present invention receives a first web document. (Specification, page 16, line 22, to page 17, line 6) The present invention receives a request to perform an action, wherein the request to perform an action comprises one of a request to present a selected portion of the first web document, a request to change a font attribute of a selected portion of the first web document, and a request to display page break indicators within the first web document. (Specification, page 19, line 5, to page 20, line 15) The present invention creates in the web browser a second web document comprising at least a portion of the first web document in response to receiving the request, wherein the first web document and the second web document are markup language documents. (Specification, page 23, lines 2-5)

Independent claim 48:

The present invention provides an apparatus for processing a document. (Specification, page 20, line 26, to page 21, line 3) The present invention provides receiving means for receiving a first web document including formatting information used to display the first web document. (Specification, page 16, line 22, to page 17, line 6) The present invention provides receiving means for receiving a request to present a selected portion of the first web document. (Specification, page 19, lines 5-16) The present invention provides identifying means for identifying formatting information associated with the selected portion of the first web document. (Specification, page 22, line 27, to page 23, line 2 and page 23, line 6, to page 26, line 10) The present invention provides creating means for creating in a web browser a second web document consisting of the selected portion and the formatting information associated with the selected portion in response to receiving the request, wherein the first web document and the second web document are markup language documents. (Specification, page 23, lines 2-5) The present invention provides, responsive to a request to change a font attribute of the selected portion, inserting means for inserting virtual font indicators before and after text within the selected portion. (Specification, page 27, line 26, to page 28, line 13) The present invention provides, responsive to a request to identify a page break in the selected portion, inserting means for inserting at least one virtual page break indicator within the selected portion. (Specification, page 31, lines 6-21)

The means recited in independent claim 48, as well as dependent claims 49-52, may be data processing hardware within server **104** or clients **108, 110, and 112** in **Figure 1** operating under control of software performing the steps described in the specification at page 17, line 7 to page 20, line 25; page 22, line 22, to page 25, line 30; page 27, line 10, to page 29, line 3; and page 30, line 25, to page 31, line 21, or equivalent.

Independent claim 53:

The present invention provides an apparatus for processing a document. (Specification, page 25, line 31, to page 26, line 10) The present invention provides receiving means for

receiving a first web document. (Specification, page 16, line 22, to page 17, line 6) The present invention provides receiving means for receiving a request to change a font attribute of a selected portion of the first web document. (Specification, page 19, lines 17-29) The present invention provides creating means for creating in a web browser a second web document from the first web document, wherein the font attribute of the selected portion within the second web document is changed in response to receiving the request to change the font attribute of the selected portion, wherein the first web document and the second web document are markup language documents. (Specification, page 27, line 10, to page 29, line 3)

The means recited in independent claim 53, as well as dependent claims 54-59, may be data processing hardware within server **104** or clients **108**, **110**, and **112** in **Figure 1** operating under control of software performing the steps described in the specification at page 17, line 7 to page 20, line 25 and page 27, line 10, to page 29, line 3, or equivalent.

Independent claim 60:

The present invention provides an apparatus for processing a document. (Specification, page 29, lines 4-16) The present invention provides receiving means for receiving a first web document. (Specification, page 16, line 22, to page 17, line 6) The present invention provides receiving means for receiving a request to display page break indicators within the first web document. (Specification, page 20, lines 7-15) The present invention provides identifying means for identifying page break information for the first web document for an output device. (Specification, page 30, lines 25-30) The present invention provides creating means for creating in a web browser a second web document from the first web document, wherein at least one virtual page break indicator is inserted into the second web document, in response to the page break information, to indicate the location of page breaks, wherein the first web document and the second web document are markup language documents. (Specification, page 30, line 30, to page 31, line 21)

The means recited in independent claim 60, as well as dependent claims 61-63, may be data processing hardware within server **104** or clients **108**, **110**, and **112** in **Figure 1** operating

under control of software performing the steps described in the specification at page 17, line 7 to page 20, line 25 and page 30, line 25, to page 31, line 21, or equivalent.

Independent claim 64:

The present invention provides an apparatus for processing a document. (Specification, page 20, line 26, to page 21, line 3) The present invention provides receiving means for receiving a first web document including a header. (Specification, page 16, line 22, to page 17, line 6) The present invention provides receiving means for receiving a request to perform an action, wherein the request to perform an action comprises one of a request to present a selected portion of the first web document, a request to change a font attribute of a selected portion of the first web document, and a request to display page break indicators within the first web document. (Specification, page 19, line 5, to page 20, line 15) The present invention provides creating means for creating in a web browser a second web document comprising at least a portion of the first web document in response to receiving the request, wherein the first web document and the second web document are markup language documents. (Specification, page 23, lines 2-5)

The means recited in independent claim 64 may be data processing hardware within server **104** or clients **108, 110, and 112** in **Figure 1** operating under control of software performing the steps described in the specification at page 17, line 7 to page 20, line 25; page 22, line 22, to page 25, line 30; page 27, line 10, to page 29, line 3; and page 30, line 25, to page 31, line 21, or equivalent.

Independent claim 65:

The present invention provides a computer program product in a computer readable medium for processing a document. (Specification, page 20, line 26, to page 21, line 3) The present invention provides instruction means for receiving a first web document including formatting information used to display the first web document. (Specification, page 16, line 22, to page 17, line 6) The present invention provides instruction means for receiving a request to present a selected portion of the first web document. (Specification, page 19, lines 5-16) The

present invention provides instruction means for identifying formatting information associated with the selected portion of the first web document. (Specification, page 22, line 27, to page 23, line 2 and page 23, line 6, to page 26, line 10) The present invention provides instruction means for creating in a web browser a second web document consisting of the selected portion and the associated formatting information in response to receiving the request, wherein the first web document and the second web document are markup language documents. (Specification, page 23, lines 2-5) The present invention provides, responsive to a request to change a font attribute of the selected portion, instruction means for inserting virtual font indicators before and after text within the selected portion. (Specification, page 27, line 26, to page 28, line 13) The present invention provides, responsive to a request to identify a page break in the selected portion, instructions for inserting at least one virtual page break indicator within the selected portion. (Specification, page 31, lines 6-21)

A person having ordinary skill in the art would be able to derive computer instructions on a computer readable medium as recited in claim 65 given **Figures 7, 11, 15, and 18** and the corresponding description at page 17, line 7 to page 20, line 25; page 22, line 22, to page 25, line 30; page 27, line 10, to page 29, line 3; and page 30, line 25, to page 31, line 21, without undue experimentation.

Independent claim 66:

The present invention provides a computer program product in a computer readable medium for processing a document. (Specification, page 25, line 31, to page 26, line 10) The present invention provides instruction means for receiving a first web document. (Specification, page 16, line 22, to page 17, line 6) The present invention provides instruction means for receiving a request to change a font attribute of a selected portion of the first web document. (Specification, page 19, lines 17-29) The present invention provides instruction means for creating in a web browser a second web document from the first web document, wherein the font attribute of the selected portion within the second web document is changed in response to receiving the request to change the font attribute of the selected portion, wherein the first web

document and the second web document are markup language documents. (Specification, page 27, line 10, to page 29, line 3)

A person having ordinary skill in the art would be able to derive computer instructions on a computer readable medium as recited in claim 66 given **Figures 7 and 15** and the corresponding description at page 17, line 7 to page 20, line 25 and page 27, line 10, to page 29, line 3, without undue experimentation.

Independent claim 67:

The present invention provides a computer program product in a computer readable medium for processing a document. (Specification, page 29, lines 4-16) The present invention provides instruction means for receiving a first web document. (Specification, page 16, line 22, to page 17, line 6) The present invention provides instruction means for receiving a request to display page break indicators within the first web document. (Specification, page 20, lines 7-15) The present invention provides instruction means for identifying page break information corresponding to the first web document. (Specification, page 30, lines 25-30) The present invention provides instruction means for creating in a web browser a second web document from the first web document, wherein at least one virtual page break indicator is inserted into the second web document, in response to the page break information, to indicate the location of page breaks, wherein the first web document and the second web document are markup language documents. (Specification, page 30, line 30, to page 31, line 21)

A person having ordinary skill in the art would be able to derive computer instructions on a computer readable medium as recited in claim 67 given **Figures 7 and 18** and the corresponding description at page 17, line 7 to page 20, line 25 and page 30, line 25, to page 31, line 21, without undue experimentation.

Independent claim 68:

The present invention provides a computer program product in a computer readable medium for processing a document. (Specification, page 20, line 26, to page 21, line 3) The present invention provides instruction means for receiving a first web document. (Specification, page 16, line 22, to page 17, line 6) The present invention provides instruction means for receiving a request to perform an action, wherein the request to perform an action comprises one of a request to present a selected portion of the first web document, a request to change a font attribute of a selected portion of the first web document, and a request to display page break indicators within the first web document. (Specification, page 19, line 5, to page 20, line 15) The present invention provides instruction means for creating in a web browser a second web document comprising at least a portion of the first web document in response to receiving the request, wherein the first web document and the second web document are markup language documents. (Specification, page 23, lines 2-5)

A person having ordinary skill in the art would be able to derive computer instructions on a computer readable medium as recited in claim 68 given **Figures 7, 11, 15, and 18** and the corresponding description at page 17, line 7 to page 20, line 25; page 22, line 22, to page 25, line 30; page 27, line 10, to page 29, line 3; and page 30, line 25, to page 31, line 21, without undue experimentation.

Independent claim 69:

The present invention provides an apparatus comprising a processor; a memory electrically connected to said processor, the memory having stored therein a program to be executed on said processor for performing the following steps. (Specification, page 20, line 26, to page 21, line 3) The present invention provides for receiving a first web document including. (Specification, page 16, line 22, to page 17, line 6) The present invention provides for receiving a request to perform an action, wherein the request to perform an action comprises one of a request to present a selected portion of the first web document, a request to change a font attribute of a selected portion of the first web document, and a request to display page break indicators within

the first web document. (Specification, page 19, line 5, to page 20, line 15) The present invention provides for creating in a web browser a second web document comprising at least a portion of the first web document in response to receiving the request, wherein the first web document and the second web document are markup language documents. (Specification, page 23, lines 2-5)

The system recited in claim 69 may be a bus system comprised of system bus **212**; I/O adapter **218**; communication adapter **234**, memory comprised of read only memory **216** and random access memory **214**, and central processing unit **210** of **Figure 2** performing the steps described in the specification at page 17, line 7 to page 20, line 25; page 22, line 22, to page 25, line 30; page 27, line 10, to page 29, line 3; and page 30, line 25, to page 31, line 21, or equivalent.

Independent claim 70:

The present invention provides a computer system having stored therein a web browser application. (Specification, page 13, lines 14-23) The present invention provides interface means for allowing the user to interface with the web browser application. (Specification, page 13, lines 24-28) The present invention provides communication means for receiving a first web document from a network. (Specification, page 14, lines 5-11) The present invention provides creation and editing means for creating a second web document. (Specification, page 14, lines 12-22)

Wherein the creation and editing means has a plurality of modes of operation includes: a first mode of operation in which the creation and editing means receives a request from the interface means to present a selected portion of the first web document, identifies formatting information associated with the selected portion of the first web document, and creates in the web browser a second web document consisting of the selected portion and the associated formatting information in response to receiving the request, (Specification, page 22, line 22, to page 25, line 30) a second mode of operation in which the creation and editing means receives a request from the interface means to change a font attribute of a selected portion of the first web document, and creates in the web browser a second web document from the first web document, wherein the font attribute of the selected portion within the second web document is changed in response to receiving the request to change the font attribute of the selected portion, (Specification, page 27, line 10, to page 29, line 3) and a third mode of operation in which the creation and editing means

receives a request from the interface means to display page break indicators within the first web document, identifies page break information corresponding to the first web document, and creates in the web browser a second web document from the first web document, wherein at least one virtual page break indicator is inserted into the second web document, in response to the page break information, to indicate the location of page breaks, wherein the first web document and the second web document are markup language documents (Specification, page 30, line 25 to page 31, line 2)

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection to review on appeal are as follows:

A. GROUND OF REJECTION (Claims 13-16, 19-24, 27-31, 53-55, 57-58, and 66)

Whether claims 13-16, 19-24, 27-31, 53-55, 57-58, and 66 are obvious under 35 U.S.C. § 103(a) over Imielinski et al. (U.S. Patent Application Publication No. 2002/0013792 A1).

B. GROUND OF REJECTION (Claims 1-7, 9-12, 17, 25, 32-37, 39-48, 51-52, 56, 59-65, and 67-70)

Whether claims 1-7, 9-12, 17, 25, 32-37, 39-48,, 51-52, 56, 59-65, and 67-70 are obvious under 35 U.S.C. § 103(a) over Imielinski et al. (U.S. Patent Application Publication No. 2002/0013792 A1) and further in view of Batres (U.S. Patent No. 6,832,351 B1).

ARGUMENT

A. GROUND OF REJECTION (Claims 13-16, 19-24, 27-31, 53-55, 57-58, and 66)

A.1. Group A: Claims 13, 53, and 66

Claim 13 is representative of the claims in this group and reads as follows:

13. A method in a web browser on a data processing system for processing a document, said method comprising:
receiving a first web document;
receiving a request to change a font attribute of a selected portion of the first web document; and
creating in the web browser a second web document from the first web document, wherein the font attribute, within the second web document, of the selected portion is changed in response to receiving the request to change the font attribute of the selected portion, wherein the first web document and the second web document are markup language documents.

The Examiner uses Imielinski et al. that has a filing date of December 28, 2000 and claims benefit of a Provisional Application (Provisional Application No. 60/173,757) which has a filing date of December 30, 1999. Therefore, Appellants respectfully submit only the information disclosed in the Provisional Application may be used as prior art because any added material in Imielinski when filed December 28, 2000 does not qualify as prior art. Provisional Application 60/173,757 has been included with this response.

The Examiner alleges:

The standard for evaluating whether a preceding Provisional Application properly supports the subject matter relied upon to make a rejection based on a Non-Provisional Application is whether the subject matter meets the requirements of 35 U.S.C. 112, first paragraph. See, MPEP, 2136.03(III).

The inquiry is not whether a claim limitation in question is taught expressly in the underlying Provisional Application under a 35 U.S.C. 102 analysis, but whether the subject matter cited as prior art is properly supported by the underlying Provisional Application under a 35 U.S.C. 112, first paragraph analysis. Upon a finding that the subject matter in the Non-Provisional Application is properly supported by the underlying Provisional Application, under the 35 U.S.C. 112, first paragraph analysis, then the subject matter is entitled to the benefit of the earlier filing date. Accordingly, the expression of the subject matter in the Non-Provisional Application is also accorded the benefit of

the earlier filing date and citation to the underlying Provisional Application is not necessary.

Regarding the rejections of claims **13-16, 19-24, 27-31, 53-55, 57, 58, and 66**:

Under the standard expressed above, the Examiner believes the rejection of claims 13-16, 19-24, 27-31, 53-55, 57, 58, and 66 under 35 U.S.C. 102(e) to have been proper. The Examiner also recognizes a colorable argument in Applicants' Response to Office action in that the strength of citation to the Non-Provisional Application of Imielinski turns on interpretation of whether the subject matter was supported by the prior Provisional Application. Upon consideration of Applicants' arguments, the Examiner withdraws the rejection of claims 13-16, 19-24, 27-31, 53-55, 57, 58, and 66 under 35 U.S.C. 102(e). However, upon further consideration, a new ground of rejection is made under 35 U.S.C. 103(a). Accordingly, Applicants' arguments regarding 35 U.S.C. 102(e) are moot.

Applicants argue that the Provisional Application does not teach the following limitations as recited in independent claim 13: *"receiving a request to change a font attribute of a selected portion of the first web document; and creating in the web browser a second web document from the first web document, wherein the font attribute, within the second web document, of the selected portion is changed in response to receiving the request to change the font attribute of the selected portion, wherein the first web document and the second web document are markup language document."* See, Response to Office Action, pages 17 and 18.

Applicant fails to specifically identify which elements of the cited portion of claim 13 are not taught by the Provisional Application. It is believed by the Examiner that the deficiency in the cited prior art related to the limitation "receiving a request to change a font attribute." See, Response to Office Action, page 18.

Since the Applicants quote solely from claim 13, only claim 13 will be addressed, and the response will apply to independent claims 53 and 56, and to dependent claims 14-16, 19-24, 27-31, 54, 55, 57, and 58 by virtue of their dependency on independent claims 13 and 53, according to the relationship argued by the Applicants. It is noted for clarification that the prior art cited against claim 13 was cited from the Patent Application Publication, "Imielinski."

Imielinski teaches creating a virtual page or second web document from a first web document using virtual tags. The virtual tags identify the original document content or a selected portion of the original document content for creation of the virtual page. The virtual tags have the ability to manipulate the formatting information, such as font attribute information, in the subsequent web document, called a virtual page by Imielinski. Batres teaches previewing and printing a web document via an HTML renderer. The content and formatting may be manipulating in the HTML renderer. Batres also defines a multiple-page HTML document, which can demarcate HTML document information among a plurality of pages. All limitations of claim 13 are taught in Imielinski, except that

the limitation of a “font attribute” is not expressly taught in the Provisional Application. See, Provisional Application, page 5, line 30 through page 6, line 3.

The Provisional Application discusses modification of the text to color it red in order to draw attention to the text. See, Provisional Application, page 2, lines 27-29. The Provisional Application is expressly not limited to the disclosed embodiments, and it is recognized that other arrangements can be readily devised by those skilled in the art.

Modification of the font attribute is expressly taught in Imielinski. See, Imielinski, fig. 9B, paragraph (0049) [Table 1], paragraph (0067) - (0068), and claims 6, 41, and 74.

It would have been obvious to one of ordinary skill in the art at the time of the invention to change the font in a text. The suggestion or motivation for doing so is taught in the Provisional Application that the tags can be “visualized on the source web page,” with the obvious and beneficial advantage to changing text color or font being to draw the reader’s attention to the text.

35 U.S.C. 112, first paragraph reads as follows:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Appellants agree with the Examiner’s assertion that the Provisional Application must meet with the requirements of 35 U.S.C. 112, first paragraph. Appellants respectfully submit that Imielinski’s Provisional Application does not meet with the requirements of 35 U.S.C. 112, first paragraph, in that, Imielinski’s Provisional Application does not provide a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same that would teach or suggest receiving a request to change a font attribute of a selected portion of the first web document; and creating in the web browser a second web document from the first web document, wherein the font attribute, within the second web document, of the selected portion is changed in response to receiving the request to change the font attribute of the selected portion, wherein the first web document and the second web document are markup language documents, as recited in claim 13.

In the Provisional Application, Imielinski describes tagging portions of web pages by readers of the pages rather than by the page owners. The tags used by Imielinski are defined by a combination of context, structure of the page, item lists, and other content defined predicates.

The tags are tied to the page's content through procedural action and descriptive expressions in a unique language. The tags, which are considered virtual because they exist physically apart from the text of the web page they tag, are stored in a virtual tag repository. The virtual tag repository maintains a count of how often each virtual tag has been used and can communicate this information back to the owner of the source page. Imielinski also describes virtual active tags that can be used for sending messages about pre-specified changes of the tagged content to the user. Finally, Imielinski describes that virtual tags and virtual active tags can be used to set up personalized selections of services for any web site.

The Examiner alleges that Imielinski teaches receiving a request to change a font attribute of a selected portion of the first web document; and creating in the web browser a second web document from the first web document, wherein the font attribute, within the second web document, of the selected portion is changed in response to receiving the request to change the font attribute of the selected portion, wherein the first web document and the second web document are markup language documents in the following sections:

We claim:

A system for marking at least a portion of a web page comprising:

(Imielinski, Provisional Application, column 5, line 30 to column 6, line 3)

Virtual tags can be virtualized on the source page, presenting the "user interest" distribution on different segments of the page. For example, frequently accessed or referenced areas on the page can be displayed in a different color, i.e. red.

(Imielinski, Provisional Application, column 2, lines 27-29)

In these cited sections of the Provisional Application, Imielinski describes that a portion of a web page may be marked or virtualized on the source page. The marking on the source page may be in a different color. Thus, Imielinski merely uses data that is collected for frequently accessed or referenced areas, to mark on the source page those areas that are frequently accessed or referenced. Appellants respectfully submit that Imielinski's does not teach or suggest receiving a request to **change a font attribute of a selected portion of the first web document**.

Additionally, Imielinski does not teach or suggest creating **a second web document** in the web browser **from the first web document**, wherein the font attribute, within the second web

document, of the selected portion is changed **in response to receiving the request to change the font attribute of the selected portion.**

The Examiner bears the burden of establishing a *prima facie* case of obviousness based on the prior art when rejecting claims under 35 U.S.C. § 103. *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992). Since the reference fail to teach or suggest receiving a request to change a font attribute of a selected portion of the first web document; and creating in the web browser a second web document from the first web document, wherein the font attribute, within the second web document, of the selected portion is changed in response to receiving the request to change the font attribute of the selected portion, wherein the first web document and the second web document are markup language documents, the Examiner has failed to establish a *prima facie* case of obviousness, because the Examiner does not show where each and every claim limitation is taught or fairly suggested by the applied prior art.

Furthermore, no suggestion is present in the reference to modify the reference to include such features. That is, there is no teaching or suggestion in Imielinski that a problem exists for which receiving a request to change a font attribute of a selected portion of the first web document; and creating in the web browser a second web document from the first web document, wherein the font attribute, within the second web document, of the selected portion is changed in response to receiving the request to change the font attribute of the selected portion, wherein the first web document and the second web document are markup language documents, is a solution. To the contrary, Imielinski appears to teach using data that is collected for frequently accessed or referenced areas, to mark on the source page those areas that are frequently accessed or referenced.

In view of the above, Appellants respectfully submit that the Imielinski fails to teach or suggest the features of claims 13. The other claims in this group are patentable other this cited reference for the same reasons. Accordingly, Appellants respectfully request the rejection of claims 13-16, 19-24, 27-31, 53-55, 57, 58, and 66 under 35 U.S.C. § 103 not be sustained.

A.2. Group B: Claims 14, 22, 54, and 57

Claim 14 is representative of the claims in this group and reads as follows:

14. The method of claim 13, wherein the step of creating the second web document includes inserting virtual font indicators before and after text within the selected portion.

Appellants respectfully submit that the Provisional Application of Imielinski does not teach the step of creating the second web document includes inserting virtual font indicators before and after text within the selected portion. As discussed above, Imielinski merely inserts virtual tags and virtual active tags that describe a combination of context, structure of the page, item lists, and other content defined predicates. No mention, suggestion, or incentive is present whatsoever in the Provisional Application of virtual font indicators.

In view of the above, the Provisional Application of Imielinski fails to teach or suggest the specific features recited in independent claims 13 and 53, from which claims 14, 22, 54, and 57 depend. Accordingly, Appellants respectfully request the rejection of claims 14, 22, 54, and 57 under 35 U.S.C. § 103 not be sustained.

A.3. Group C: Claims 16, 24, 55, and 58

Claim 16 is representative of the claims in this group and reads as follows:

16. The method of claim 15, wherein the output device is a display device, the selected portion being displayed according to the virtual font indicators.

Appellants respectfully submit that the Provisional Application of Imielinski does not teach the selected portion being displayed according to the virtual font indicators. As discussed above, Imielinski merely inserts virtual tags and virtual active tags that describe a combination of context, structure of the page, item lists, and other content defined predicates. While the virtual tags and virtual active tags of Imielinski may be displayed for the owner of the page, the virtual tags and virtual active tags described in the Provisional Application do not include any font information and Imielinski does not display any information according to any virtual font indicators.

In view of the above, the Provisional Application of Imielinski fails to teach or suggest the specific features recited in independent claims 13 and 53, from which claims 16, 24, 55, and 58 depend. Accordingly, Appellants respectfully request the rejection of claims 16, 24, 55, and 58 under 35 U.S.C. § 103 not be sustained.

A.4. Group D: Claim 30

Claim 30 is representative of the claims in this group and reads as follows:

30. The method of claim 13, wherein the step of creating the second web document comprises creating a copy of the first web document and changing the font attribute of the selected portion within the copy of the first web document.

Appellants respectfully submit that the Provisional Application of Imielinski does not teach the step of creating the second web document comprises creating a copy of the first web document and changing the font attribute of the selected portion within the copy of the first web document. As discussed above, Imielinski merely inserts virtual tags and virtual active tags that describe a combination of context, structure of the page, item lists, and other content defined predicates. Imielinski does not teach creating a copy of a first web document, changing a font attribute of a selected portion within the copy of the first web document, and then creating a second web document.

In view of the above, the Provisional Application of Imielinski fails to teach or suggest the specific features recited in independent claim 13, from which claim 30 depends. Accordingly, Appellants respectfully request the rejection of claim 30 under 35 U.S.C. § 103 not be sustained.

A.5. Group E: Claim 31

Claim 16 is representative of the claims in this group and reads as follows:

31. The method of claim 13, wherein the step of creating the second web document comprises changing the font attribute of the selected portion within the first web document to create the second web document.

Appellants respectfully submit that the Provisional Application of Imielinski does not teach the step of creating the second web document comprises changing the font attribute of the selected portion within the first web document to create the second web document. As discussed above, Imielinski merely inserts virtual tags and virtual active tags that describe a combination of context, structure of the page, item lists, and other content defined predicates. Imielinski does not teach changing a font attribute of a selected portion within the copy of the first web document, and then creating a second web document.

In view of the above, the Provisional Application of Imielinski fails to teach or suggest the specific features recited in independent claim 13, from which claim 31 depends. Accordingly, Appellants respectfully request the rejection of claim 31 under 35 U.S.C. § 103 not be sustained.

B. GROUND OF REJECTION (Claims 1-7, 9-12, 17, 25, 32-37, 39-48, 51-52, 56, 59-65, and 67-70)

Claim 1 is representative of the claims in this group and reads as follows:

1. A method in a web browser on a data processing system for processing a document, the method comprising:
 - receiving a first web document including formatting information used to display the first web document;
 - receiving a request to present a selected portion of the first web document;
 - identifying formatting information associated with the selected portion of the first web document;
 - creating in the web browser a second web document including the selected portion and the formatting information associated with the selected portion, in response to receiving the request, wherein the first web document and the second web document are markup language documents;
 - responsive to a request to change a font attribute of the selected portion, inserting virtual font indicators before and after text within the selected portion;
 - and
 - responsive to a request to identify a page break in the selected portion, inserting at least one virtual page break indicator within the selected portion.

The deficiency of Imielinski has been addressed above. Appellants respectfully submit that the Imielinski and Batres, taken alone or in combination, fail to teach or suggest the similar features recited in independent claim 1. That is, Imielinski fails to teach or suggest receiving a

request to change a font attribute of a selected portion of the first web document; and creating in the web browser a second web document from the first web document, wherein the font attribute, within the second web document, of the selected portion is changed in response to receiving the request to change the font attribute of the selected portion, wherein the first web document and the second web document are markup language documents, as recited in independent claim 13. Batres does not make up for the deficiencies of Imielinski, as Batres fail to teach or suggest receiving a request to change a font attribute of a selected portion of the first web document; and creating in the web browser a second web document from the first web document, wherein the font attribute, within the second web document, of the selected portion is changed in response to receiving the request to change the font attribute of the selected portion, wherein the first web document and the second web document are markup language documents.

In view of the above, Appellants respectfully submit that Imielinski and Batres, taken alone or in combination, fail to teach or suggest the features of representative claim 1. Thus none of the features in claim 1 found in the other claims of this group are taught or suggested by Imielinski and Batres, whether taken individually or in combination. Accordingly, Appellants respectively request the rejection of claims 1-7, 9-12, 17, 25, 32-37, 39-48, 51, 52, 56, 59-65, and 67-70 under 35 U.S.C. § 103 not be sustained.

CONCLUSION

In view of the above, Appellants respectfully submit that claims 1-7, 9-17, 19-25, 27-37, and 39-70 are allowable over the cited prior art and that the application is in condition for allowance. Accordingly, Appellants respectfully request the Board of Patent Appeals and Interferences to reverse the rejections set forth in the Final Office Action.

Respectfully submitted,

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CLAIMS APPENDIX

The text of the claims involved in the appeal are:

1. A method in a web browser on a data processing system for processing a document, the method comprising:

receiving a first web document including formatting information used to display the first web document;

receiving a request to present a selected portion of the first web document;

identifying formatting information associated with the selected portion of the first web document;

creating in the web browser a second web document including the selected portion and the formatting information associated with the selected portion, in response to receiving the request, wherein the first web document and the second web document are markup language documents;

responsive to a request to change a font attribute of the selected portion, inserting virtual font indicators before and after text within the selected portion; and

responsive to a request to identify a page break in the selected portion, inserting at least one virtual page break indicator within the selected portion.

2. The method of claim 1, further comprising sending the second web document to an output device.

3. The method of claim 2, wherein the output device is a printer.

4. The method of claim 2, wherein the output device is a display device.
5. The method of claim 1, further comprising:
receiving a request to change a font attribute of a selected portion of the second web document; and
creating in the web browser a third web document from the second web document, wherein the font attribute, within the third web document, of the selected portion is changed in response to receiving the request to change the font attribute of the selected portion.
6. The method of claim 5, further comprising:
receiving a request to display page break indicators within the third web document;
identifying page break information for the third web document for an output device; and
creating in the web browser a fourth web document from the third web document, wherein at least one virtual page break indicator is inserted into the fourth web document, in response to the page break information, to indicate the location of page breaks.
7. The method of claim 1, further comprising:
receiving a request to display page break indicators within the second web document;
identifying page break information for the second web document for an output device;
and
creating in the web browser a third web document from the second web document, wherein at least one virtual page break indicator is inserted into the third web document, in response to the page break information, to indicate the location of page breaks.

9. The method of claim 1, wherein the formatting information includes tags.
10. The method of claim 1, wherein the markup language is hypertext markup language.
11. The method of claim 10, wherein the formatting information includes hypertext markup language tags.
12. The method of claim 10, wherein the formatting information includes a header.
13. A method in a web browser on a data processing system for processing a document, said method comprising:
 - receiving a first web document;
 - receiving a request to change a font attribute of a selected portion of the first web document; and
 - creating in the web browser a second web document from the first web document, wherein the font attribute, within the second web document, of the selected portion is changed in response to receiving the request to change the font attribute of the selected portion, wherein the first web document and the second web document are markup language documents.
14. The method of claim 13, wherein the step of creating the second web document includes inserting virtual font indicators before and after text within the selected portion.

15. The method of claim 14, further comprising sending the second web document to an output device.
16. The method of claim 15, wherein the output device is a display device, the selected portion being displayed according to the virtual font indicators.
17. The method of claim 15, wherein the output device is a printer, the selected portion being printed according to the virtual font indicators.
19. The method of claim 14, wherein the virtual font indicators include tags.
20. The method of claim 14, wherein the markup language is hypertext markup language.
21. The method of claim 20, wherein the virtual font indicators include hypertext markup language tags.
22. The method of claim 13, further comprising identifying at least one font indicator associated with text within the selected portion of the first web document, wherein the step of creating the second web document includes modifying the font attribute of the associated at least one font indicator.
23. The method of claim 22, further comprising sending the second web document to an output device.

24. The method of claim 23, wherein the output device is a display device, the selected portion being displayed according to the modified at least one font indicator.
25. The method of claim 23, wherein the output device is a printer, the selected portion being printed according to the modified at least one font indicator.
27. The method of claim 22, wherein the at least one font indicator includes a tag.
28. The method of claim 22, wherein the markup language is hypertext markup language.
29. The method of claim 28, wherein the at least one font indicator includes a hypertext markup language tag.
30. The method of claim 13, wherein the step of creating the second web document comprises creating a copy of the first web document and changing the font attribute of the selected portion within the copy of the first web document.
31. The method of claim 13, wherein the step of creating the second web document comprises changing the font attribute of the selected portion within the first web document to create the second web document.
32. A method in a web browser on a data processing system for processing a document, the method comprising:

receiving a first web document;
receiving a request to display page break indicators within the first web document;
identifying page break information for the first web document for an output device; and
creating in the web browser a second web document from the first web document,
wherein at least one virtual page break indicator is inserted into the second web document, in
response to the page break information, to indicate the location of page breaks, wherein the first
web document and the second web document are markup language documents.

33. The method of claim 32, further comprising:

removing the at least one virtual page break indicator; and
printing the second web document.

34. The method of claim 32, further comprising:

replacing the at least one virtual page break indicator with at least one forced page break;
and
printing the second web document.

35. The method of claim 32, further comprising sending the second web document to the
output device.

36. The method of claim 35, wherein the output device is a printer.

37. The method of claim 35, wherein the output device is a display device.

39. The method of claim 32, wherein the at least one virtual page break indicator includes a tag.
40. The method of claim 32, wherein the markup language is hypertext markup language.
41. The method of claim 40, wherein the at least one virtual page break indicator includes a hypertext markup language tag.
42. The method of claim 32, wherein the step of creating the second web document comprises creating a copy of the first web document and inserting at least one virtual page break indicator into the copy of the first web document.
43. The method of claim 32, wherein the step of creating the second web document comprises inserting the at least one virtual page break indicator into the first web document to create the second web document.
44. The method of claim 32, wherein the step of identifying page break information comprises sending the first web document to a device driver and receiving page break information corresponding to the first web document from the device driver.
45. The method of claim 32, wherein the device driver is a printer driver.

46. The method of claim 32, wherein the step of identifying page break information comprises identifying the location of at least one page break based on page setup information, document formatting information, and document content.

47. A method in a web browser on a data processing system for processing a document, the method comprising:

receiving a first web document;

receiving a request to perform an action, wherein the request to perform an action comprises one of a request to present a selected portion of the first web document, a request to change a font attribute of a selected portion of the first web document, and a request to display page break indicators within the first web document; and

creating in the web browser a second web document comprising at least a portion of the first web document in response to receiving the request, wherein the first web document and the second web document are markup language documents.

48. An apparatus for processing a document, comprising:

receiving means for receiving a first web document including formatting information used to display the first web document;

receiving means for receiving a request to present a selected portion of the first web document;

identifying means for identifying formatting information associated with the selected portion of the first web document;

creating means for creating in a web browser a second web document consisting of the selected portion and the formatting information associated with the selected portion in response to receiving the request, wherein the first web document and the second web document are markup language documents;

responsive to a request to change a font attribute of the selected portion, inserting means for inserting virtual font indicators before and after text within the selected portion; and

responsive to a request to identify a page break in the selected portion, inserting means for inserting at least one virtual page break indicator within the selected portion.

49. The apparatus of claim 48, further comprising means for displaying the second web document.

50. The apparatus of claim 48, further comprising means for printing the second web document.

51. The apparatus of claim 48, further comprising:

means for receiving a request to change a font attribute of a selected portion of the second web document; and

means for creating a third web document from the second web document, wherein the font attribute of the selected portion within the third web document is changed in response to receiving the request to change the font attribute of the selected portion.

52. The apparatus of claim 48, further comprising:

means for receiving a request to display page break indicators within the second web document;

means for identifying page break information for the second web document for an output device; and

means for creating a third web document from the second web document, wherein at least one virtual page break indicator is inserted into the third web document, in response to the page break information, to indicate the location of page breaks.

53. An apparatus for processing a document, comprising:

receiving means for receiving a first web document;

receiving means for receiving a request to change a font attribute of a selected portion of the first web document; and

creating means for creating in a web browser a second web document from the first web document, wherein the font attribute of the selected portion within the second web document is changed in response to receiving the request to change the font attribute of the selected portion, wherein the first web document and the second web document are markup language documents.

54. The apparatus of claim 53, wherein the creating means comprises means for inserting virtual font indicators before and after text within the selected portion.

55. The apparatus of claim 54, further comprising means for displaying the second web document, the selected portion being displayed according to the virtual font indicators.

56. The apparatus of claim 54, further comprising means for printing the second web document, the selected portion being printed according to the virtual font indicators.

57. The apparatus of claim 53, further comprising means for identifying at least one font indicator associated with text within the selected portion of the first web document, wherein the creating means comprises means for modifying the font attribute of the associated at least one font indicator.

58. The apparatus of claim 57, further comprising means for displaying the second web document, the selected portion being displayed according to the at least one modified font indicator.

59. The apparatus of claim 57 further comprising means for printing the second web document, the selected portion being printed according to the at least one modified font indicator.

60. An apparatus for processing a document, comprising:
receiving means for receiving a first web document;
receiving means for receiving a request to display page break indicators within the first web document;
identifying means for identifying page break information for the first web document for an output device; and

creating means for creating in a web browser a second web document from the first web document, wherein at least one virtual page break indicator is inserted into the second web document, in response to the page break information, to indicate the location of page breaks, wherein the first web document and the second web document are markup language documents.

61. The apparatus of claim 60, further comprising:

removing means for removing the at least one virtual page break indicator; and
printing means for printing the second web document.

62. The apparatus of claim 60, further comprising:

replacing means for replacing the at least one virtual page break indicator with at least one forced page break; and
printing means for printing the second web document.

63. The apparatus of claim 60, further comprising means for displaying the second web document.

64. An apparatus for processing a document, comprising:

receiving means for receiving a first web document including a header;
receiving means for receiving a request to perform an action, wherein the request to perform an action comprises one of a request to present a selected portion of the first web document, a request to change a font attribute of a selected portion of the first web document, and a request to display page break indicators within the first web document; and

creating means for creating in a web browser a second web document comprising at least a portion of the first web document in response to receiving the request, wherein the first web document and the second web document are markup language documents.

65. A computer program product in a computer readable medium for processing a document, the computer program product comprising:

instruction means for receiving a first web document including formatting information used to display the first web document;

instruction means for receiving a request to present a selected portion of the first web document;

instruction means for identifying formatting information associated with the selected portion of the first web document;

instruction means for creating in a web browser a second web document consisting of the selected portion and the associated formatting information in response to receiving the request, wherein the first web document and the second web document are markup language documents;

responsive to a request to change a font attribute of the selected portion, instruction means for inserting virtual font indicators before and after text within the selected portion; and

responsive to a request to identify a page break in the selected portion, instructions for inserting at least one virtual page break indicator within the selected portion.

66. A computer program product in a computer readable medium for processing a document, the computer program product comprising:

instruction means for receiving a first web document;

instruction means for receiving a request to change a font attribute of a selected portion of the first web document; and

instruction means for creating in a web browser a second web document from the first web document, wherein the font attribute of the selected portion within the second web document is changed in response to receiving the request to change the font attribute of the selected portion, wherein the first web document and the second web document are markup language documents.

67. A computer program product in a computer readable medium for processing a document, the computer program product comprising:

instruction means for receiving a first web document;

instruction means for receiving a request to display page break indicators within the first web document;

instruction means for identifying page break information corresponding to the first web document; and

instruction means for creating in a web browser a second web document from the first web document, wherein at least one virtual page break indicator is inserted into the second web document, in response to the page break information, to indicate the location of page breaks, wherein the first web document and the second web document are markup language documents.

68. A computer program product in a computer readable medium for processing a document, the computer program product comprising:

instruction means for receiving a first web document;

instruction means for receiving a request to perform an action, wherein the request to perform an action comprises one of a request to present a selected portion of the first web document, a request to change a font attribute of a selected portion of the first web document, and a request to display page break indicators within the first web document; and

instruction means for creating in a web browser a second web document comprising at least a portion of the first web document in response to receiving the request, wherein the first web document and the second web document are markup language documents.

69. An apparatus comprising:

a processor;

a memory electrically connected to said processor, the memory having stored therein a program to be executed on said processor for performing the following steps:

receiving a first web document including;

receiving a request to perform an action, wherein the request to perform an action comprises one of a request to present a selected portion of the first web document, a request to change a font attribute of a selected portion of the first web document, and a request to display page break indicators within the first web document; and

creating in a web browser a second web document comprising at least a portion of the first web document in response to receiving the request, wherein the first web document and the second web document are markup language documents.

70. A computer system having stored therein a web browser application, the system comprising:

interface means for allowing the user to interface with the web browser application;
communication means for receiving a first web document from a network;
creation and editing means for creating a second web document, wherein the creation and editing means has a plurality of modes of operation including:

a first mode of operation in which the creation and editing means receives a request from the interface means to present a selected portion of the first web document, identifies formatting information associated with the selected portion of the first web document, and creates in the web browser a second web document consisting of the selected portion and the associated formatting information in response to receiving the request;

a second mode of operation in which the creation and editing means receives a request from the interface means to change a font attribute of a selected portion of the first web document, and creates in the web browser a second web document from the first web document, wherein the font attribute of the selected portion within the second web document is changed in response to receiving the request to change the font attribute of the selected portion; and

a third mode of operation in which the creation and editing means receives a request from the interface means to display page break indicators within the first web document, identifies page break information corresponding to the first web document, and creates in the web browser a second web document from the first web document, wherein at least one virtual page break indicator is inserted into the second web document, in response to the page break information, to indicate the location of page

breaks, wherein the first web document and the second web document are markup language documents.

EVIDENCE APPENDIX

Imielinski et al. (Provisional Application No. 60/173,757)

RELATED PROCEEDINGS APPENDIX

There are no related proceedings.

PROVISIONAL APPLICATION FOR PATENT COVER SHEET (Small Entity)

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53 (c).

INVENTOR(S)/APPLICANT(S)

Given Name (first and middle (if any))	Family Name or Surname	Residence (City and either State or Foreign Country)
Tomasz Vince Don	Imielinski Sgro Smith	North Brunswick, New Jersey

☐ Additional inventors are being named on page 2 attached hereto**TITLE OF THE INVENTION (280 characters max)****VIRTUAL TAGS AND THE PROCESS OF VIRTUAL TAGGING****CORRESPONDENCE ADDRESS**

Direct all correspondence to:

☐ Customer Number Place Customer Number
Bar Code Label here

OR

☒ Firm or
Individual Name Diane Dunn McKay

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ENCLOSED APPLICATION PARTS (check all that apply)

<input checked="" type="checkbox"/> Specification	Number of Pages	6	<input checked="" type="checkbox"/> Small Entity Statement
<input checked="" type="checkbox"/> Drawing(s)	Number of Sheets	1	<input type="checkbox"/> Other (specify) <input type="text"/>

METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT (check one)☒ A check or money order is enclosed to cover the filing feesFILING FEE
AMOUNT (\$)☐ The Commissioner is hereby authorized to charge filing fees or
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13-2165

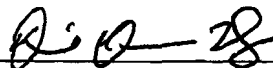
\$75.00

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

☒ No.☐ Yes, the name of the U.S. Government agency and the Government contract number are:

Respectfully submitted,

SIGNATURE



Date

December 30, 1999

TYPED or PRINTED NAME Diane Dunn McKay

REGISTRATION NO.
(if appropriate)

34,586

TELEPHONE

609-924-8555

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PROVISIONAL APPLICATION FOR PATENT COVER SHEET (Small Entity)

INVENTOR(S)/APPLICANT(S)		
Given Name (first and middle [if any])	Family Name or Surname	Residence (city and either State or Foreign Country)

Certificate of Mailing by Express Mail

I certify that this application and enclosed fee is being deposited on December 30, 1999 with the U.S. Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. 1.10 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.



Signature of Person Mailing Correspondence

Diane Dunn McKay

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**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY
STATUS (37 CFR 1.9(f) AND 1.27 (d)) - NONPROFIT ORGANIZATION**

Docket No.
1419-134P

Serial No.
Herewith

Filing Date
December 30, 1999

Patent No.
TBD

Issue Date
TBD

Applicant/ Imielinski, T.
Patentee:

Invention: VIRTUAL TAGS AND THE PROCESS OF VIRTUAL TAGGING

I hereby declare that I am an official empowered to act on behalf of the nonprofit organization identified below:

NAME OF ORGANIZATION: Rutgers University
ADDRESS OF ORGANIZATION: Office of Corporate Liaison & Technology Transfer
Administrative Services Bldg., Annex II
P.O. Box 1179
Piscataway, NJ 08855-1179

TYPE OF NONPROFIT ORGANIZATION:

- ☒ University or other Institute of Higher Education
- ☐ Tax Exempt under Internal Revenue Service Code (26 U.S.C. 501(a) and 501(c)(3))
- ☐ Nonprofit Scientific or Educational under Statute of State of The United States of America
Name of State: Citation of Statute:
- ☐ Would Qualify as Tax Exempt under Internal Revenue Service Code (26 U.S.C. 501(a) and 501(c)(3)) if Located in The United States of America
- ☐ Would Qualify as Nonprofit Scientific or Educational under Statute of State of The United States of America if Located in The United States of America
Name of State: Citation of Statute:

I hereby declare that the above-identified nonprofit organization qualifies as a nonprofit organization as defined in 37 C.F.R. 1.9(e) for purposes of paying reduced fees to the United States Patent and Trademark Office regarding the invention described in:

- ☒ the specification to be filed herewith.
- ☐ the application identified above.
- ☐ the patent identified above.

I hereby declare that rights under contract or law have been conveyed to and remain with the nonprofit organization with regard to the above identified invention.

If the rights held by the above-identified nonprofit organization are not exclusive, each individual, concern or organization having rights to the invention is listed on the next page and no rights to the invention are held by any person, other than the inventor, who could not qualify as an independent inventor under 37 CFR 1.9(c) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

- ☒ no such person, concern or organization exists.
☐ each such person, concern or organization is listed below.

FULL NAME

ADDRESS

☐ Individual

☐ Small Business Concern

☐ Nonprofit Organization

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Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING:

William Adams

TITLE IN ORGANIZATION:

Director

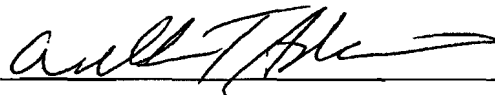
ADDRESS OF PERSON SIGNING:

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SIGNATURE:



DATE:

12/28/99

VIRTUAL TAGS AND THE PROCESS OF VIRTUAL TAGGING

Background of the Invention

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Conventional proxy servers retrieve web pages and syntactically transform them to better present their content on devices other than those intended to view those pages. However, these proxy servers work purely by translating the page content into a more appropriate form. Accordingly, they do not change the web access experience to which a user is exposed.

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Style sheets are used to set a style for a web page or multiple web pages. Style sheets provide information separate from the content of the page they reference. Accordingly, style sheets add functional display information to the tags physically present in the page. It is desirable to delimit and annotate information in a web page to allow portions of web pages to be identified for independent retrieval.

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Summary of the Invention

The present invention relates to a system and process of tagging portions of web pages by readers of the pages (clients) rather than by the page owners (servers). The tags are defined by a combination of context, for example words and phrases, structure of the page, for example paragraphs, item lists, and other content defined predicates.

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The tags are considered virtual because they exist physically apart from the text of the web page they tag. The virtual tags are tied to the page's content through procedural action and descriptive expressions in a unique language. A virtual object can be used to embody the procedural aspects and other information supporting the virtual tags implementation. This is in contrast to typical owner defined tags, which are part of the content of the web page they tag. Each virtual tag, in addition to its defining procedure, includes a verbal description, such as "today's weather" or "top three movies", and expiration clauses, which are described in detail below.

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Virtual tags are stored, along with their verbal descriptions, in a virtual tag repositior (VTR). The VTR maintains a count of how often each virtual tag has been used

and can communicate this information back to the owner of the source page. In this manner, the source page owner can be made aware which parts of the owned web pages are frequently requested and may decide to include that information in the web page's tag structure. Accordingly, the process provides adaptive tagging of page content which reflects the information demand. This has the advantage that the more the page owner knows about that demand structure, the better he can tailor the tags on the page. In contrast, in the conventional "blind tagging" which involves the source page owner tagging in anticipation of individual user interest, the page owner possesses no real knowledge of the user's interest. Additionally, virtual tags can be viewed and used by other clients, so the same process for creating virtual tags does not have to be repeated by the other clients. In this way all the clients and the server (owner of the web page) are involved in the "collaborative tagging" of the web page. The process of virtual tagging can be used for XML pages, wherein clients may choose to tag substructures of the XML objects defined by the server.

Virtual active tags can be used for sending messages about pre-specified changes of the tagged content to the user. In this manner, the users can monitor selected areas of the source pages without any additional effort on the part of the server. A page owner may set up a virtual active tag to provide messages to the page owner following user interest. Virtual active tags also allow tracking and monitoring of arbitrarily specific objects and data items which occur on the source web page without any additional effort necessary on the part of the owner of the source web page.

Virtual Tags can include expiration clauses. The expiration clauses monitor source page changes that may affect the semantic correctness of the virtual tag. For example, due to the structural changes of a source web page, a virtual tag may no longer tag the content that corresponds to its semantic description. An expiration clause related to this "warning condition" may result in the review of the tag definition by the user.

Virtual tags can be visualized on the source web page, presenting the "user interest" distribution on different segments of the page. For example, frequently accessed or referenced areas on the page can be displayed in a different color, i.e. red.

Virtual tagging can be used to enable small devices, such as PDAs, small screen phones, and phones with voice only input/output, to access information which has already

been created on the web for users equipped with general purpose graphic terminals.

Virtual tagging is a scalable solution to the otherwise hopeless problem of having the web site owner tag information on his web site in anticipation of any possible use of it on any device or any possible user interest. Virtual tags free the web page owner from any awareness of the devices that might access his page. Virtual tagging also allows the gathering of "micro-statistics" about user interest in page components. This can lead, possibly, to more focused advertising banners associated with virtual tags rather than with the entire page. The technology also facilitates "Collaborative Tagging" which allows other clients to see the virtual tags created so far. This provides the server with the ability of incorporating the client tags in the page through the use of the shared virtual tag repository.

Virtual tags and virtual active tags can be used to set up personalized selections of services for any web site. These personalized services can be both passive, requiring the user to request the information through some device, or active, bringing the information to the user's attention through email, a text pager, etc. Virtual tagging simplifies the site maintainer's task of providing specific, user customizable services and allows the user select the services they desire. Virtual tags, through the virtual tag repository, can provide feedback for adaptive tagging of the source page in a way which better reflects the demand for specific information on that the page than "blind tagging" alone, thereby this can lead to well-tailored pages that evolve to better meet the structure of demand for the information presented there.

Detailed Description

Fig. 1 illustrates a schematic diagram of a system for marking at least one portion of a web page 10. A graphical user interface 12 is used at user system 11 to view and create virtual tags 14 for tagging web pages 13 which are part of world wide web 15. Web pages 13 that are virtually tagged can be addressed by for example: URLs, URLs obtained through CGI scripts running of a web server, i.e. results from searches or from submissions, where the CGI query is a part of the URL, and indirect links that are followed selectively based on user defined parameters. Graphical user interface 12

allows the user to point to defining tags contextually by using intelligence which reflects the page structure as well as the features dependent on the semantics of the page content.

Virtual tags 14 are stored in virtual tag repository 18 located on user system 11. Alternatively, virtual tag repository 18 can be located remotely if user system 11 and
 5 networked to user system 11 and possibly other user. Virtual tag repository 18 is used for storage, retrieval, caching, analysis, and enforcement of virtual tags 14 and the information they delimit. Graphical user interface 12 also allows users such as clients or servers to view "micro-statistics" derived from the information stored in virtual tag repository 18.

10 Virtual tag 20 objects are generated by graphical user interface 12 as incarnations of virtual tags 14 stored in the virtual tag repository 18. Virtual tag objects 20 embody the procedural aspect of virtual tags 14 as well as any other information supporting the implementation of virtual tags 14.

Virtual tag expressions 22 are part of virtual tag objects 20. Virtual tag
 15 expressions 22 are generated by graphical user interface 12. Virtual tag expressions 22 are expressed in a language that clearly identifies how to process the virtually tagged web page to get from it the information that is tagged. Gateways permit the retrieval of the virtually tagged content by the various devices that may be used to present it.

In summary, virtual tags can relate to indirect physical tags for providing the
 20 ability to tag existing web page elements such as table cells, elements of ordered and unordered lists, paragraphs, titles, subtitles, etc.; context dependent tag for providing the ability to tag changing content based on the patterns that precede and follow the content on a web page, for example, a virtual tag may delimit all entries of a dated list up to a certain date, when such data is present; and inclusive tags for providing the ability to tag
 25 different structures that contain a given pattern, such as a word or phrase, for example, a virtual tag may delimit a paragraph based on the existence of words within it.

It must also be made clear that while the description of this invention is directed toward its application to web based information, it is also applicable to other forms of information available through other Internet technologies.

30 It is to be understood that the above-described embodiments are illustrative of only a few of the many possible specific embodiments which can represent applications

of the principles of the invention. Numerous and varied other arrangements can be readily devised in accordance with these principles by those skilled in the art without departing from the spirit and scope of the invention.

We claim:

A system for marking at least a portion of a web page comprising:

means for creating a virtual tag, said virtual tag including reference to context,

5 structure of the page, and a verbal description;

means for storing said created virtual tag in a virtual tag repository;

means for accessing said stored virtual tag; and

means for monitoring said stored virtual tag.

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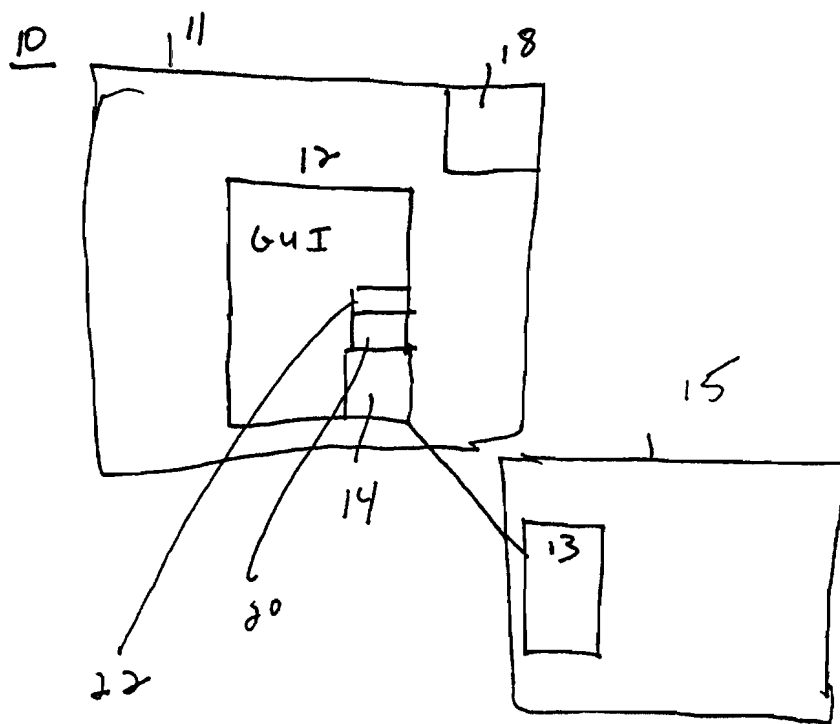


FIG. 1